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| 09/718,924 | 11/22/2000 | Timothy Roy Block | ROC9-2000-0123-US1 | 2147 |

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| EXAMINER |
|---|
| EDELMAN, BRADLEY E |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2153 | |

DATE MAILED: 11/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/718,924 | Applicant(s) BLOCK, TIMOTHY ROY |
|---|---|---|
| | Examiner Bradley Edelman | Art Unit 2153 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>07 June 2004</u>.

2a)☒ This action is **FINAL**.     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 November 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/29, 4/23, 6/18 2004</u>

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

## DETAILED ACTION

This Office action in response to Applicant's amendment and request for

reconsideration filed on June 7, 2004. Claims 1-20 are presented for examination.

Claims 13-20 are new claims.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.      Claims 1, 4, 6, 9-11, and 13-20 are rejected under 35 U.S.C. 102(e) as being

anticipated by Stern (U.S. Patent No. 6,654,757).

In considering claim 1, Stern discloses an apparatus ("MFTP transmitter")

comprising:

At least one processor (inherent), a memory coupled to the at least one

processor (inherent), and a network interface (inherent) that couples the apparatus to a

plurality of other computer systems (col. 9, lines 57-67, wherein the multicast messages

go to a plurality of other connected computer systems); and

A cluster communication mechanism residing in the memory and executed by the

at least one processor (inherent to allow the master to communicate with the other

computer systems in the group), the cluster communication mechanism including a

sliding send window that communicates at least one ordered message to a plurality of

the other computer systems without waiting for an acknowledge message from any of

the plurality of other computer systems before sending out the next ordered message

(col. 10, lines 1-39, "An MFTP transmitter does not stop and wait for acknowledgments

before continuing to transmission.  Rather, it transmits continuously until the whole file

has been transmitted...").

In considering claim 4, Stern discloses a networked computer system

comprising:

A cluster of computer systems (i.e. MFTP transmitter and its group of multicast

receiving systems, col. 10, lines 26-30), that each includes:

A network interface that couples each computer system via a network to other

computer systems in the cluster, and a memory (all inherent in the receiving systems);

and

A cluster communication mechanism residing in the memory, the cluster

communication mechanism enforcing execution of a plurality of received messages in

the order the plurality of received messages were received, the cluster communication

mechanism including a sliding send window that communicates at least one ordered

message to a plurality of other computer systems without waiting for an

acknowledgment from any of the plurality of other computer systems before sending out

the next ordered message (col. 9, line 57 – col. 10, line 39, "An MFTP transmitter does

not stop and wait for acknowledgments before continuing to transmission. Rather, it
transmits continuously until the whole file has been transmitted...").

In considering claim 6, Stern discloses a computer-implemented method for
processing a task in a clustered computing environment, the method comprising the
steps of:

Providing a cluster communication mechanism executing on a first computer
system ("MFTP transmitter") in a cluster that includes a sliding send window that
communicates at least one ordered message to a plurality of other computer systems in
the cluster without waiting for an acknowledgment from each computer system in the
cluster that received an ordered message before sending out the next ordered message
(col. 9, line 57 – col. 10, line 39, "An MFTP transmitter does not stop and wait for
acknowledgments before continuing to transmission. Rather, it transmits continuously
until the whole file has been transmitted...");

The cluster communication mechanism sending a first ordered message to a first
plurality of other computer systems in the cluster; and

The cluster communication mechanism sending a second ordered message to a
second plurality of other computer systems in the cluster without waiting for a response
to the first ordered messages from each of the first plurality of other computer systems
in the cluster (col. 9, line 57 – col. 10, line 39).

In considering claim 9, Stern discloses a program product comprising a computer program comprising:

A cluster communication mechanism that includes a sliding send window that communicates at least one ordered message to a plurality of other computer systems in a cluster without waiting for an acknowledge message from any of the plurality of other computer systems before sending out the next ordered message (col. 9, line 57 – col. 10, line 39); and

Computer-readable signal bearing media bearing the computer program (inherent).

In considering claim 10, Stern further discloses that the signal bearing media comprises recordable media (inherent).

In considering claim 11, Stern further discloses that the signal bearing media comprises transmission media (inherent).

In considering claims 13, 17, and 19, Stern further discloses that the ordered message is communicated to the plurality of other computer systems via IP multicast ("multicast IP," col. 10, lines 30-32).

In considering claims 14, 18, and 20, Stern further discloses that the communication mechanism enforces execution of a plurality of received messages in

the order the plurality of received messages were received (i.e. it doesn't wait for any

acknowledgments, but just processes the messages as they are received).

In considering claim 15, Stern further discloses that the first plurality of

computers includes all computers systems in the second plurality of computers systems

(the MFTP multicast messages are sent to the same multicast group of recipients).

In considering claim 16, Stern further discloses that the first plurality of computer

systems comprises the second plurality of computer systems (the MFTP multicast

messages are sent to the same multicast group of recipients).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.      Claims 2, 3, 5, 7, 8, and 12 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Stern, in view of Ywoskus et al. (U.S. Patent No. 5,528,605,

hereinafter "Ywoskus").

In considering claims 2, 5, 8, and 12, Stern discloses the use of a multicast

sliding window messaging system that sends subsequent messages without waiting for

an acknowledgment from any of the recipients, wherein the acknowledgments are

grouped (col. 10, lines 1-15 describe this grouping). However, Stern remains silent regarding the particular method used to allow the messages to be sent without waiting for acknowledgments. Nonetheless, one such way of ensuring that messages can be sent to a recipient without waiting for acknowledgments from the recipient is by including in the message header information that indicates whether an acknowledge messages for the messages may be delayed and grouped with at least one subsequent acknowledge message, as described by Ywoskus.

In a similar art, Ywoskus discloses a system for sending messages from a master to a slave computer, wherein the messages are acknowledged, but wherein the acknowledgments are grouped based on information stored in the header of the messages ("Message Header field 202," col. 5, line 15, has information that indicates whether an acknowledge message for the ordered messages may be delayed and grouped with at least one subsequent acknowledge message, col. 6, lines 1-10, "with the Response Requested bit 234 CLEAR, then the CLEAR bit indicates that a delayed acknowledgment to receipt of message 200 is satisfactory for the transmitting master station"; see also, col. 2, lines 42-47: "means for the slave computer to delay sending a group acknowledgment that at least a first group of the plurality of messages were received"). Given this knowledge, a person having ordinary skill in the art would have readily recognized the desirability and advantages of causing the delayed acknowledgments taught by Stern by including information in a message header, as taught by Ywoskus, in order to minimize message size (i.e. by avoiding the need to send completely separate messages with the instructions), thereby saving network

bandwidth. Therefore, it would have been obvious to include acknowledgment instructions in the headers of the messages, as taught by Ywoskus, in the multicast sliding window messaging system taught by Stern.

In considering claim 3, Stern and Ywoskus further disclose that the acknowledge message acknowledges from one to a plurality of ordered messages (i.e. in Stern, the messages are generally acknowledged as a group, but if there is only one message, it will be acknowledged by itself; in Ywoskus, a "group" of messages, col. 2, lines 40-47; wherein each messages is ordered according to a "sequence number," col. 5, lines 55-59).

In considering claim 7, Stern and Ywoskus further disclose that at least one of the first plurality of other computer systems in the cluster responds to the first and second ordered messages by sending a single acknowledge message to the cluster communication mechanism that acknowledges both the first and second ordered messages (Stern, col. 10, lines 7-8, "clients are obliged to send acknowledgments about the previous block at block boundaries; Ywoskus, col. 6, lines 1-10, "with the Response Requested bit 234 CLEAR, then the CLEAR bit indicates that a delayed acknowledgment to receipt of message 200 is satisfactory for the transmitting master station"; See also, col. 2, lines 42-47: "means for the slave computer to delay sending a group acknowledgment that at least a first group of the plurality of messages were received").

### *Response to Arguments*

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 703-306-3041. The examiner can normally be reached from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BE
October 26, 2004

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SUPERVISORY PATENT EXAMINER
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